REMARKS

Applicant gratefully acknowledges the thorough examination to date and has made an effort to fully respond to the allegations raised by the Examiner. Applicant has taken care and believes that no new matter has been introduced by way of this Response. Reconsideration of the application, in view of the above amendments and following remarks is respectfully requested.

Claims 1-31; 41-55

35 U.S.C. 102(e)

The Examiner has rejected claims 1-31,41-55 under 35 U.S.c. 102(e) as being anticipated by Heaslip et al. (U.S. Patent No. 6,643,807).

In Applicant's previous response to the Office Action, Applicant submitted, and the Examiner has accepted, as noted at page 2 of the action, that Heaslip et al. disclose detecting memory failures during the comparison of BIST operations, using a read compare register 255 to compare the data read back from the arrays to the data written. When the read compare determines that the data-out from the register does not match the expected result (based upon the data-in from the data generator), a defective memory element has been found.

Thus, in the cited Heaslip et al. reference, upon detection of an error, testing stops, and all of the relevant test data is output off-chip.

By contrast, the Applicant teaches in his specification, and now has made explicit in independent claims 1 and 41 that testing of a row or column continues uninterrupted until testing of that row or column has been completed.

Applicant has set out at all times in these claims, moreover, that the information that is transmitted is not all of the failure data but "a failure summary".

For these reasons, Applicant respectfully submits that the amended claims as now presented, incorporate features that are not taught or suggested by the cited Heaslip et al. reference.

Applicant refers the Examiner to paragraph 45 of the description, which provides:

"The method of the present invention seeks to provide the maximum amount of failure information that can be transferred to a tester without having to interrupt at-speed i.e. while testing the cells of a column or row. In several cases, a complete bitmap indicating the exact location of all failures can be obtained in a single pass. In cases where the density of failures is such that the exact location of each failure cannot be transferred to the tester, statistics about the failures and partial information about the location can be transferred instead. This information might still be sufficient in some applications such as process monitoring and yield analysis, however, if more information is required, the memory test can be repeated and focus on portions of the memory." [emphasis added]

As such, the amendments to claim 1 and 41 submitted concurrently herewith do not constitute the addition of new matter. Additionally, it is clear from the foregoing extract for the specification that the concept of the failure summary is not equivalent to all of the failure data that has been gathered about a failure. Rather, it is only so much of the data that can be transferred in a timely manner without interrupting the testing of the cells of a row or column, that is transferred.

As dependent claims 2-31, and 42-54 are dependent from a now allowable base claim, Applicant submits that these objections have been respectfully traversed.

Amendments

Applicant has made a number of further amendments to claims 2 through 31. In large part, these amendments are made to correct some of the dependent claim wording, which, as previously presented, was phrased in terms of an apparatus claim as opposed to a method claim from which they depend. Additionally, some of the wording has been clarified or simplified.

Claims 7 and 30 previously presented have been cancelled on the basis that these are reproductions of claims 4 and 6 respectively. Claim 26 has been amended to incorporate the wording relating to shifting of the two further summaries in parallel via corresponding outputs from claims 16. The remaining subject matter of claim 26 has been incorporated into claim 16.

Examiner's Acknowledgment of Allowability

Applicant gratefully acknowledges the Examiner's indication of the allowability of claims 32 through 40 and 56. These claims have not been amended in the claims submitted currently herewith.

Claim 55 has been objected to as being dependent on a rejected base claim, but the Examiner has indicated that it would be allowable if it had been written in independent form, including all the limitations of the previous claim and any intervening claims. Applicant has made minor amendments to claim 55, but notes that it is now dependent from claim 41, which Applicant submits is now an allowable base claim.

Disclosure

Applicant has amended the Summary of the Invention to introduce existing clauses commensurate with the scope of the broadest independent claims submitted concurrently herewith.

Conclusion

Applicant respectfully submits that all of the outstanding objections have been overcome by amendment or argument. Applicant believes that no new matter has been entered during this process. Applicant submits that all of the claims presently standing in the application are patentably distinguishable from all of the references of record, either taken alone or in any combination. Accordingly, reconsideration and allowance of this application is respectfully solicited.

This response is being forwarded to you via facsimile transmission to the Patent Examination Section (Fax No. (571) 273-3824 with the original following by courier/regular mail and trust this will be in order.

Respectfully Submitted

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By:

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September 6, 2007
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